

No. 32,213. Press Drill for Planting Grain.*(Smoir en ligne.)*

John W. Rhodes, Havana, Ill., U.S., 9th September, 1889; 5 years.

Claim.—1st. The combination of the runner frame A, the rear frames A', the axes B, the weight distributing bar C, and the rock arm D, substantially as and for the purposes hereinbefore set forth. 2nd. The combination of the front frame A and the rear frames A', of the seat beam D, and the seat supports C, substantially as and for the purposes hereinbefore set forth. 3rd. The combination, with the axes B, the wheels C, and the runners A, of the main beam E, substantially as and for the purpose hereinbefore set forth. 4th. The combination of the runner C and presser M, as and for the purposes hereinbefore set forth.

No. 32,214. Die for Impressing Ornamental Designs on Metal Tubes.*(Eclatpe pour imprimer des dessins d'ornement sur les tubes en métal.)*

John Burkhardt and William H. Jackson and Company, New York, N.Y., U.S., 9th September, 1889; 5 years.

Claim.—1st. Die plate in combination with radially grooved disks or plates, as described for the purpose specified. 2nd. Counter dies D, D', in combination with die plates A, and grooved plates B, substantially as and for the purpose specified. 3rd. The sectional chamber counter dies D, spring G, and tubular plates holders J, in combination with die plates B substantially as described for the purpose specified. 4th. The series or set of die plates, retained in vertical position respectively by retracting spring wires working in holes F of the die plates, and grooves in the inner faces of the disk plates B, in combination with counter dies D, D', as described. 5th. The triple faced die plates, with three series of edge or race configuration P, Q, R, for gradually forming indented designs or ornamental configurations upon the perimeters of tubes or analogous bodies, substantially as described.

No. 32,215. Harrow. (Herse.)

Gustavus A. Paddock, Beaver Dam, Wis., U.S., 9th September, 1889; 5 years.

Claim.—1st. In a harrow, a section containing two or more tooth bars rigidly secured together, with slanting teeth and semi-reversing attachments, substantially as and for the purposes described. 2nd. In a harrow, two sections, with slanting teeth and semi-reversing attachments, substantially as and for the purposes described. 3rd. In a harrow, two independent sections attached to a draw-bar, the teeth of each slanting directly out from the other, substantially as shown. 4th. In a harrow, a draw bar adjustable to two adjacent sides of a section, said section containing two or more tooth bars rigidly connected, substantially as described. 5th. In a harrow, the combination, with a draw-bar, of two sections having slanting teeth and semi-reversing attachments, substantially as described. 6th. In a harrow, the combination, with two sections M and N, having their teeth slanted outward from each other, of semi-reversing attachments, substantially as described. 7th. In a harrow, the combination, with two sections, of a draw-bar adjustable to two adjacent sides of each section, substantially as described. 8th. In a harrow, the combination, with two sections, each of said sections containing two or more tooth bars, connected without joints, of a draw-bar adjustable to two adjacent sides of each section, substantially as and for the purposes described. 9th. In a harrow, the combination, with two sections, each containing two or more tooth bars, connected without joints, and each having its teeth slanted outward from the other, of a draw-bar adjustable to two adjacent sides of each section, substantially as described.

No. 32,216. Indestructible Fire Lighter.*(Allumoir indestructible.)*

William Eacrett, London, Ont., 9th September, 1889; 5 years.

Claim.—1st. In a lighter, consisting of a case filled with absorbent, incombustible material, a staple A passing through the same, substantially as and for the purpose hereinbefore set forth. 2nd. The combination, with the casing, constructed of foraminous reticulated sheet metal, united at its edges by suitable clips F, the staple A passing through the same, substantially as and for the purpose set forth.

No. 32,217. Process of Making Alloys of Chrome, Iron and Manganese.*(Procédé pour faire des alliages de chrome, de fer et de manganèse.)*

Heinrich Fohardt, Dortmund, (Germany), Eugene Nirnheim, David P. Palmado and Joseph Sachs, New York, N.Y., U.S., 9th September, 1889; 5 years.

Claim.—1st. The herein described process of producing alloys of chrome, iron and manganese, which consists in mixing chrome ore with the slag of the acid Bessemer process, and subjecting the mixture to the reduction process, substantially as set forth. 2nd. The process herein described, of producing alloys of chrome, iron and manganese, which consists of mixing ores of chrome and manganese with the slag of the acid Bessemer process, and subjecting the mixture to a reduction process, substantially as set forth. 3rd. The herein described process of producing alloys of chrome, iron and manganese, which consists in mixing the chromium ore, manganese ore and the slag of the acid Bessemer process in a finely ground state with a reduced mass of water, and reducing the paste mass in the form of briquettes in a blast or reverberatory furnace, substantially as set forth. 4th. In the process of making ingot iron, the application of alloys of chrome, iron and manganese, produced in hearth, blast or reverberatory furnaces, substantially as set forth.

No. 32,218. Steam Boiler.*(Chaudière à vapeur.)*

The Dominion Safety Boiler Company, Montreal, Que. (assignee of Allan Stirling, New York, N.Y., U.S.), 9th September, 1889; 5 years.

Claim.—1st. A water tube boiler, consisting of the single mud drum A, the two elevated steam and water drums A', A'', the water tubes B' connecting the water spaces of the steam and water drums, the steam tubes B'' connecting the steam spaces of said steam and water drums, and two sets of water tubes B, B', directly connected respectively at their upper ends with the steam and water drums, and both sets connected at their lower ends with the single mud drum, substantially as described. 2nd. A water tube boiler, consisting of a furnace structure, a single mud drum A, the two elevated steam and water drums A', A'', having their steam and water spaces respectively placed in communication, two sets of water tubes B, B', directly connected respectively at their upper ends with the steam and water drums, and both sets connected at their lower ends with the single mud drum, the fire-brick arch D, extending over the fire-place from the wall of the furnace structure to the front set of water tubes, and the fire brick partition C inclined between the two sets of water tubes and located between the single mud drum and the two steam and water drums, substantially as described.

No. 32,219. Explosive. (Explosif.)Frederick A. Abel, K^t, London, and James Dewar, Cambridge, Eng., 9th September, 1889; 5 years.

Claim.—1st. The manufacture of blasting gelatine or other gelatinous explosive, by the use, in combination with nitro-glycerine, of the most highly nitrated cellulose, such as gun cotton, along with a solvent, such as acetone or acetic ether, in substitution wholly or partly for the less highly nitrated soluble cellulose usually employed. 2nd. In the manufacture of gelatinous explosives, the addition of tannin, or its analogous or compound to the usual ingredients, so as to obtain a tough, hard product. 3rd. The manufacture of explosive for ammunition, by pressing gelatinous explosives through holes to form rods or wires capable of being coiled or packed in bundles or sheaves.

No. 32,220. Trace. (Trait.)

George W. Foll, Bethany, Mo., U.S., 9th September, 1889; 5 years.

Claim.—As an improvement in traces and belting, the combination, with the pair of straps forming a trace connected by stitching along their eyes, of a metallic chain interposed between said straps, said chain being composed of flat double-leaved links, each of which has a perforation in its solid portion, each alternate link being secured to one of the straps by a rivet passing through its perforation, and the perforations in the intermediate non-riveted links registering with perforations for the buckle tongue in both straps, substantially as set forth.

No. 32,221. Animal Drinking Fountain.*(Abrevoir pour les animaux.)*

Francis E. Merriman, Boston, Mass., U.S., 9th September, 1889; 5 years.

Claim.—1st. The combination of a vessel, having inlet and outlet openings, a valve controlling the outlet, and having its stem operated by the movement of the cap, which closes the inlet opening, and a supply cup or trough communicating with the discharge opening in the vessel, substantially as herein described. 2nd. The combination, with the vessel having the inlet and outlet openings, of a cap closing the inlet opening, and provided with a projection or arm, a valve closing the outlet, and a rod between the valve stem and screw cap provided with means for withdrawing the valve when the cap is fitted in position. 3rd. The combination, with the vessel having the inlet at its top, a discharge tube and a trough into which the tube discharges, of a vertical rod movable on its axis, and provided with an upper and lower laterally-projecting arm, a screw cap fitted over the inlet at the top of the can, having an arm or projection which engages and axially moves the vertical rod when the screw-cap is turned, a horizontally-moving valve stem, actuated by the lower arm of the rod, and a conical valve adapted to be seated in the discharge tube, and to be withdrawn therefrom when the screw cap is turned, substantially as herein described. 4th. The vessel A, having the surrounding trough, the inlet at its top and the discharge tube entering into the trough, in combination with the horizontally moving valve stem, the valve thereon adapted to be seated in the discharge tube, a spring surrounding the valve stem, a vertical rod movable on its axis and having upper and lower lateral arms, and a screw cap fitted over the inlet to the vessel, having an arm extending outwardly and engaging the upper arm of the vertical rod, whereby said rod is moved on its axis, and the valve withdrawn by the lower arm of said rod engaging the valve stem, substantially as herein described. 5th. The combination, with the vessel having an inlet and outlet, and a trough into which the outlet discharges, of a horizontally-moving conical valve for closing said outlet, a screw cap for closing the inlet and provided with a projection, an axially moving rod engaged by the projection on the screw-cap to withdraw the valve when the cap is fitted in position, and a spring for returning the valve and closing the outlet when the screw cap is removed for filling the vessel, substantially as herein described. 6th. The vessel having the heating chamber beneath the trough surrounding the vessel, the tube discharging into the trough and the inlet at the top of the vessel, in combination with a screw cap having the arm projection, the vertical rod having its upper bent end engaged thereby, and having a laterally-projecting arm at its bottom, the standards, the horizontally-moving valve-stem mounted therein, having a conical valve adapted to automatically close the discharge when the screw-cap is removed, and a spring for forcing the valve to its seat, said valve stem being actuated and the valve withdrawn when the screw-cap is fitted and position, substantially as herein described.